

Work Order ID 143800

Wednesday, March 23, 2016 8:22:09 AM

143800

Page 1

Item ID: D3965-4 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Bearing, Spherical
Start Date: 3/28/2016 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 3/31/2016 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: MLJ Date: MAR 23 2016 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3965	B

100		0.00							
100									
Purchasing	Memo	0.00							
Purchasing	PURCHASING								
	Issue P/O: <u>31788</u>								
	Purchase Part Number: 63215K52								
	Possible Supplier: McMaster								
	Material release note is required								

10 MAR 23 2016 DAS
13
9-89

110	Receive & Inspect for Damage & Mat'l Certs	0.00							
110									
Packaging	Memo	0.00							
Packaging									

10 SP16-03-28

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Work Order ID 143800

Wednesday, March 23, 2016 8:22:09 AM

143800

Page 2

Item ID: D3965-4 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Bearing, Spherical
Start Date: 3/28/2016 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 3/31/2016 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC6- Inspect dimensions to drawing Memo	0.00 0.00				(10)			DAS 38 9-89 MAR 29 2016
130 *130* Packaging Packaging	Identify as per dwg & Stock Location: <u>Stock</u> Memo	0.00 0.00				10	100		MAR 29 2016
140 *140* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.02				MCJ			MAR 29 2016 MAR 29 2016 MCJ

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter		FAULT CATEGORY ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center		☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence			
		☐ OTHER : _____							

Picklist Print

Wednesday, March 23, 2016 8:22:12 AM

Page 1

Work Order ID: 143800

143800

Parent Item: D3965-4

D3965-4

Parent Item Name: Bearing, Spherical

Start Date: 3/28/2016

Required Date: 3/31/2016

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP RevA: New issue DD verified by:EC
12.03.06 AS PER DWG REV.B DD VERF:EC

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

63215K52		Purchased	No			110	Each	0.0000	1	10			
----------	--	-----------	----	--	--	-----	------	--------	---	----	--	--	--

63215K52

Bearing Spherical

10 sp 16-03-28

DQA: _____ Date: _____



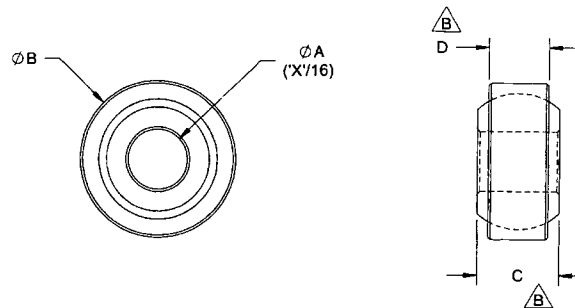
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

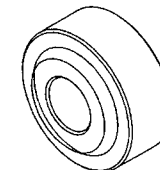
SPECIFICATION CONTROL DRAWING



D3965-X BEARING, SPHERICAL

WHERE 'X' IS I.D. IN 1/16" OF AN INCH
EG $\phi 1/4"$ (4/16") I.D. BEARING = D3965-4

DART P/N	SUPPLIER	SUPPLIER P/N	A	B	C	D	STATIC RADIAL LOAD CAP. lbs
D3965-3	McMASTER-CARR	63215K31	0.188	0.563	0.281	.219	3,975
D3965-4	McMASTER-CARR	63215K52	0.250	0.656	0.344	0.250	6,040
D3965-5	McMASTER-CARR	63215K53	0.313	0.750	0.375	0.281	8,750
D3965-6	McMASTER-CARR	63215K34	0.375	0.813	0.406	0.313	10,540



STOP COPY
RETURN TO
ENGINEERING
CONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

143800 MWS
16-03-23

RELEASED
2012-03-02

NOTES:

- 1) MATERIAL: 440C STAINLESS STEEL WITH PTFE LINER
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A

B	CORRECT LETTER DESIGNATED C & D (ZIN C4-1) PER PART 11-151	RF	12.01.10
A	NEW ISSUE	RF	09.07.09
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	DRAWING NO.	REV. B
CHECKED	140	D3965	SHEET 1 OF 1
MFG. APPR.	BE	TITLE	SCALE
APPROVED	140	BEARING, SPHERICAL	NTS
DE APPR.		COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	
DATE	12.01.10		



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31788**

Purchase Order Date 3/23/2016

PO Print Date 3/23/2016

Page Number 7 of 7

Order From :

MCMaster-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

VU-MCM001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

330 995 5500

Ship To Contact

Ship To Phone

Ship Via:

Purolator ground ppd

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 10

Currency

USD

FOB

FCA - (Free Carrier)

20	63215K52	Bearing Spherical	3/28/2016 Yes 3/28/2016	10.00, Each	\$15.62	\$156.20
----	----------	-------------------	-------------------------------	----------------	---------	----------

AS PER DWG D3965 REV. B
B143800

Line Total: \$156.20

21	71401-45	PROCUREMENT QUALITY CLAUSES	3/28/2016 No 3/28/2016	1.00	\$0.00	\$0.00
----	----------	--------------------------------	------------------------------	------	--------	--------

PROCUREMENT QUALITY CLAUSES
A005 RIGHT OF ENTRY
A016 PERSONNEL QUALIFICATION
A025 CERTIFICATE OF CONFORMANCE
A040 NOTIFICATION OF QUALITY ESCAPE
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENTS

Line Total: \$0.00

PO Total: \$742.55

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 2

Change Date: 3/23/2016



McMASTER-CARR®

Packing List

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO31788

Order Placed By
Chantal Lavoie

McMaster-Carr Number
8868897-03

Page 1 of 2

03/23/2016

Line	Product	Ordered	Shipped
1	1145N2 Paint and Drywall Mud Mixing Attachment, 3/8" Shaft Diameter, 24" Shaft Length	1 Each	1
2	2936A16 Coated Carbide 2 in 1 Countersink, Trade Size #4, 82 Degree Angle, TiCN Coating	1 Each	1 ✓
3	26885A46 Cobalt Steel Letter Size Chucking Reamer, Size F, 1-1/2" Flute Length, .2485" Shank Diameter	2 Each	2 ✓
4	11675A41 Under-Mount Drawer Slide, 12" Closed Length	2 Pairs	2 ✓
5	2082A1 Threads Per Inch and Thread Pitch Size Checker	1 Each	1 ✓
6	47865K24 Brass Ball Valve, 3/4" NPT Female Connections	1 Each	1
7	44605K155 Low-Pressure Black Malleable Iron Thread Fitting, 3/4 Pipe Size, Tee	3 Each	3
8	44605K115 Low-Pressure Black Malleable Iron Thread Fitting, 3/4 Pipe Size, 90 Degree Elbow	4 Each	4
9	44615K465 Standard-Wall Black Steel Threaded Pipe Nipple, 3/4 Pipe Size X 4" Length	1 Each	1
10	4457K229 Standard Wall Black Welded Steel Pipe, 3/4 Pipe Size X 16" Length, Threaded Ends	1 Each	1
11	4457K41 Standard Wall Black Welded Steel Pipe, 3/4 Pipe Size X 24" Length, Threaded Ends	1 Each	1
15	44605K344 Low-Pressure Black Malleable Iron Thread Fitting, 3/4 Male X 1/4 Female, Hex Reducing Bushing	3 Each	3
16	91732A734 18-8 Stainless Steel Standard Helical Insert, 1/4"-20 Internal Thread, 0.500" Length, MS122161, Packs of 10	2 Packs	2
17	92311A639 18-8 Stainless Steel Cup Point Set Screw, 3/8"-24 Thread, 1" Long, Packs of 10	20 Packs	20
18	93695K58 Oil-Rst Fire-Retardant Blended Buna-N Foam, 50 ft. Adhesive-Back Strip, 1/4" Thickness, 1" WD	1 Each	1
20	63215K52 Stainless Steel Ball Joint Swivel Bearing, PTFE Lined, 1/4" ID, 21/32" OD, 11/32" Ball Thick	10 Each	10

881603-28

Packing List

200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada

Purchase Order
PO31788

Page 2 of 2

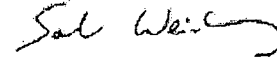
03/23/2016

Order Placed By
Chantal Lavoie

McMaster-Carr Number
8868897-03

Certificate of compliance

This is to certify that the above items were supplied in accordance with the description and as illustrated in the catalog. Your order is subject only to our terms and conditions, available at www.mcmaster.com or from our Sales Department.



Sarah Weinberg
Compliance Manager

SP 16-03-28-